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ABSTRACT

This paper describes a classroom exercise for college human development or developmental psychology classes that allows students to observe developmental differences in several children simultaneously and to teach others about the application of developmental concepts. In the exercises, the class is divided into subgroups, representing different developmental domains, which then collaborate to design activities to assess children's development within that domain. Students can be encouraged to either replicate classic research paradigms or devise new activities. Students implement these activities during a class period for which children are present and discuss their observations with the class. One or two group members are responsible for interacting with the children while another group member describes to the class the activity, the child's response, and what the responses mean in terms of developmental theory. A writing assignment or examination is used to assess student knowledge and understanding. Children of any age can be studied using this observational method, although adolescents are often reluctant to participate. Children may be recruited through students in the class or a campus child care facility. Institutional human subjects' approval, informed parental consent and when the children are of age, child consent should be obtained. Prior to the class, the instructor meets with the children and explains the types of activities they will be doing. Anecdotal evidence suggests that this classroom activity raises the intrinsic motivation of college students. (KB)

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# A CLASSROOM EXERCISE FOR OBSERVING DEVELOPMENTAL DIFFERENCES IN CHILDREN

Poster presented at the 105th Annual American Psychological Association Conference, Chicago, Illinois, August 15, 1997

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Many college instructors find themselves teaching large sections of Human Development or Developmental Psychology today and as a result of the large class sizes, often operate primarily in a lecture format. The activity described below allows instructors to break from the routine of lecturing to a large class by giving increased responsibility for learning back to the students, thereby increasing students' intrinsic motivation (Forsyth & McMillan, 1991). Instructors may shift into the role of a facilitator for this activity, rather than that of an expert or authority on the subject matter (McKeachie, 1986). This activity is designed to promote higher-order thinking processes (analysis and synthesis) rather than simple comprehension and rote memorization (Bloom, 1956). This classroom-based activity is helpful for many undergraduates who otherwise have little exposure to young children and who have difficulty realizing the real life applications of the materials which they are learning.

Some may question why a classroom observation is needed when a similar activity might be assigned outside of class. This classroom activity is beneficial because it allows students to observe developmental differences in several children simultaneously and allows students to teach one another about the application of important concepts while the observation occurs. Neither the simultaneous comparison of several children nor the peer mentoring would be easy to achieve outside of class.

Some may question whether this activity is necessary at all. Certainly a large number of Human Development courses are taught without such an activity and are quite successful in imparting knowledge to students. As with all material that goes into developing a course, the question is really one of priorities and depth of understanding. While this activity is time-consuming, I have found it to be well worth the time spent, in terms of students' increased knowledge and ability to synthesize information regarding important issues in human development.

## METHOD

The exercise has three primary components: 1) the class is divided into subgroups representing different aspects of development (i.e, cognitive, social, physical/motor) which collaborate to design activities to assess development within

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their specified domain; 2) students implement their activities during a class period where children are present and discuss their observations with the class; and 3) knowledge and understanding are assessed through a writing assignment or examination. The exercise typically involves 2 to 3 class periods (Design and planning, Actual observation, Discussion of observations).

This activity should take place upon completion of study of the development of children of a particular age range (if the course is taught chronologically) or upon completion of several substantive topical areas (if the course is taught topically).

**Recruiting Children for the Observation**

Children of any age range can be studied using this observational method, however adolescents are often highly self-conscious and reluctant to participate fully in activities in front of a large group of undergraduates. The age range of children under observation should not be excessively wide as activities utilized during the observation should be applicable to all or most of the children being observed in order to keep all children motivated to participate. This activity works particularly well with children ages birth - 8 years old.

Recruitment of children is the first step in implementing this activity. This is necessary so that the instructor is prepared to inform students of the age range of participants for the observation, allowing students to design assessments appropriate to the children being observed. Children can be recruited from a number of places. Sometimes students enrolled in the class have children or siblings who are available to participate (as is the case on our campus where many nontraditional students attend). Other times, arrangements can be made with a campus child care facility or with friends or relatives of students in the class. In all cases, institutional human subjects' approval should be obtained as should informed parental consent for each child (see sample consent form at back). Parents are informed that the primary purpose of the activity is to facilitate student learning so no formal developmental assessment of their child will be made. Similarly, when children are of an age where they can understand what they will be doing, consent of the child should also be obtained.

Typically three to four children varying in age from a few months to a few years are selected. Instructors may choose to consider diversity in gender, age, racial background, and ability or disability when recruiting and selecting children for the observation. I usually circulate a sign-up sheet in class a couple of weeks prior to the observation asking students to indicate children who they believe might be available to participate as well as to answer a few questions about the child (age, gender, etc.). From this list I then select children who represent the diversity I seek and contact these children.

**Preparing Students for the Observation**

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To begin, the class is divided based upon student interests into subgroups representing different aspects of development. In deciding what specific subgroups to form, the instructor can facilitate a discussion where students develop a list of the logical categories for examining development. This list of categories may vary considerably from instructor to instructor because of different emphases or theoretical frameworks utilized. During this discussion, instructors can suggest topics which are omitted by students but which are important to course objectives. Table 1 shows the major categories of development that students in my classes often use for the observation. Students then volunteer for one of the subgroups in which they have an interest. (I typically just ask for a show of hands for each aspect of development and assign people to groups on the spot. Alternatively, you could pass around sign up sheets.) Optimally, given the short time that students have to work together to design their assessment activities, groups should be kept small (5-7 students) so that all students have a chance to actively participate. Where class sizes exceed 45 or 50 students, it may be necessary to form 2 groups who examine the same aspect of development in order to keep group sizes at 5-7 students (i.e, two groups would independently design activities to assess cognitive development).

**Development of Activities to be Used in the Observation**

Once students have volunteered for specific subgroups, they gather with their group members to design activities to assess children's knowledge and abilities within their specified domain of development. At this point, it is important for the instructor to inform students of the age range of participants who will be participating in the classroom activity (typically 3-4 children ranging in age by a few months to a few years). In this way, students can work to discover differences which they might expect across children due to age/maturational changes. Students are encouraged to think of important developmental tasks or achievements that are typical of children of the ages they will be observing and then design ways to assess children's abilities with simple, entertaining activities. The instructor can encourage students to replicate classic research paradigms (i.e., a Piagetian conservation of number or volume task, Piaget and Inhelder's (1969) Three Mountain Problem) or to devise new activities to assess development.

Some of the behaviors in which students will be interested are truly incidental behaviors which occur during normal activities (e.g., spontaneous speech, social referencing) while others will involve specifically designed assessments. Students are encouraged to consider both incidental and specifically provoked assessments when designing their activities. Because I have the resources at my disposal, I tell students that I will have the following basic materials available for use during the assessments: ball, crayons and paper, colored chalk, hand puppets, Uno cards, picture and word books, blunt scissors, and building blocks. I

encourage students to bring any other materials they decide are necessary for their assessment, though I emphasize that many aspects of development can be assessed with limited materials. During this planning session, the instructor circulates throughout the room, consulting with subgroups who have questions or who are in need of suggestions regarding what to assess or how to assess it.

Because each group has only a brief period of time (approximately 10 minutes) to assess the children on the observation day, students are encouraged to prioritize activities in terms of ones which will yield the most information about each child's development. This need to prioritize activities often generates interesting discussions among students regarding the most important developmental achievements to examine.

Students are informed that one or two group members should be responsible for interacting with the children while another group member should narrate to the class what they are doing, why they are doing the activity, how the children respond, and what those responses mean in terms of developmental theory. For example, a group studying cognitive development in early school-age children may be interested in classification skills, and therefore may use a game such as "Uno" which requires multiple classification skills (classifying by number and color) to examine children's abilities. Students are encouraged to make predictions about the abilities of children to demonstrate various skills and to utilize the technical terminology used in class to describe their expectations (with respect to the aforementioned example, students might predict that preoperational children, because of their tendency to show centration, would not succeed at the Uno task, while concrete operational children would successfully master the Uno task).

**Conducting the Observation and Discussion of Findings**

On the day of the observation, I meet the children in my office prior to class. I explain the types of activities and games that the children will be asked to do and try to see that the children are comfortable with me prior to going to the classroom. I usually explain to the children that the students in the class are trying to learn about children and they have been invited to class to help the students learn. I have used the exercise with infants and children up to age 10 and have found that most children adjust quite well to the large observation group. For those reluctant children, I encourage the parent to join the child at the front of the class and this usually allays the fears once the activities begin. In the 8 times I have used this activity, I have had only 1 child refuse to participate.

On the day of the observation, students are asked to sit with their groups. Assessment of all children occurs simultaneously with the entire class observing rather than in the individual subgroups. This allows all students to see the assessments, critique the adequacy of the assessment methods, and make


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interpretations regarding their observations. As each domain of development is named by the instructor, the group member(s) who are going to engage the children in the activities and the narrator are asked to come forward. One member actively engages the children in the tasks designed to assess developmental progress while the second group member explains the tasks and their expectations of the children based on developmental theory and research evidence. As each task is completed, the remaining group members record their observations and how well the observations fit with their expectations.

While the observation day is fast paced and a bit hectic, it is usually possible to allow each of the groups approximately 10 minutes for their domain-specific assessment of the children. I have frequently found that the latter groups take less time because some of the activities they have devised have already been used by another group assessing a different aspect of development. When this occurs, there is a great opportunity to point out how highly interrelated the various domains of development truly are. One example of this may be when the motor development subgroup has the children draw a picture of their families (to assess fine motor skills) and in the course of this drawing, they talk with the children about who they consider to be members of their family and why (which also assesses expressive language and cognitive development as it relates to the abstract concept of family).

At the end of the class period, the children are thanked for their assistance and given a small gift (stickers, pencil, etc.) as a token of appreciation.

**Evaluating Student Learning through the Observation**

Students can be asked to write a short reflection paper after the classroom observation, addressing any of a wide variety of issues from practical concerns (Were your assessment strategies adequate?) to theoretical ones (How can the observations in your domain of development be explained by theory or previous research?). Students can be asked to speculate on reasons why their predictions were not always accurate or to speculate on meta-issues such as the nature-nurture debate in light of their observations. This paper could help students to gain an understanding of individual differences (i.e., how prior experience and individual interests affect children's performances), a phenomenon often ignored in favor of theories which propose consistent changes in children. Alternatively, this paper may help students become more explicitly aware of the overlapping nature of assessment of various domains of development (how language and social development are related or how receptive language and cognitive development are difficult to tease apart from one another).

Assessment of student understanding can also take place through examinations. The format of questions can be modified to suit the instructors needs. Table 2

provides examples of questions based on the observation activity in both multiple choice and short answer formats. In both cases, emphasis is placed on developing questions which require a synthesis of information and problem-solving.

**RESULTS AND CONCLUSIONS**

While no formal data collection has examined the utility of this classroom technique, there is ample anecdotal evidence to suggest that this classroom-based activity raises the intrinsic motivation of students in Human Development classes. For example, in my own classes, whereas during a typical lecture many students tend to fill seats near the back of the classroom and show only modest interest by their nonverbal and verbal cues, students typically sit at the edges of their seats, near the front of the classroom, careening their necks to be able to observe the children during this exercise. Nearly every student becomes actively engaged in this activity and can contribute meaningfully to a discussion by describing their observations. Students truly enjoy observing children and can observe children's behaviors in a new light when guided to apply the principles of development which they are learning in this class. Students also raise more questions about behaviors they actually observe in others following this activity.

In sum, this activity provides an interesting opportunity for students to observe and assess the development of young children within a classroom setting. This activity provides several advantages over a similar activity which could be done outside of class including opportunities to: simultaneously compare several children, increase the diversity of children observed, allow for peer mentoring and teaching, and engage students in an active learning collaboration. The activity helps many students to clarify misconceptions regarding developmental theory and to see the applicability of theory to the every day lives of children.

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TABLE 1
DOMAINS OF DEVELOPMENT AND PHENOMENA TO BE EXAMINED

COGNITIVE
- Piagetian stage
- Centration
- Conservation of matter
- Abstract reasoning
- Use of memory strategies
- Memory for different types of information (words, gestures)

SOCIAL
- Egocentrism
- Types of play
- Gender stereotypes/preferences
- Pretend play and social perspective-taking
- Social referencing

PHYSICAL/MOTOR
- Left/right dominance
- Hand eye coordination
- Grasp
- Gross motor control
- Fine motor control

LANGUAGE
- Differences in receptive versus expressive language
- Use of

MORAL
- Kohlberg's (1984) stage of development
- Following rules

SELF-CONCEPT

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**TABLE 2**
**Examples of Examination Questions Used to Evaluate Student Learning**

Multiple choice format:

When Sara, age 13 months, kept turning to her mother whenever she was presented with a new toy during our classroom observation, she was exhibiting
- a. stranger anxiety
- b. a lack of object permanence
- c. an ambivalent attachment
- * d. social referencing

During the classroom observation, Jesse (age 4 years, 1 month) showed her limited perspective-taking abilities when she
- a. said that the cookie split into three pieces was more than a similar sized cookie split into two pieces
- b. told the interviewer that she needed to go to the bathroom
- * c. asked the interviewer, "What's this?" referring to a picture inside the book she was looking at, when the interviewer could only see the outside cover
- d. stood next to Jameel while waiting her turn to draw on the chalkboard

During the classroom observation, Johnny was asked to follow several simple instructions like "Put the red block under the cup." and "Show me, 'The car hit the doll'" in order to assess _____. Johnny was also asked to draw a picture of his family and to cut with scissors in order to assess _____.
- a. propositional thinking: gross motor skills
- b. expressive language: fine motor skills
- c. social referencing: parallel play behavior
- * d. receptive language: fine motor skills

Short Answer Format:

Describe examples of how 2 of the children we observed in class showed characteristics of preoperational thinking.
(Students should give examples of centration on 1 characteristic of a situation, precausal reasoning, or egocentrism citing specific examples of the children's behavior)

During our classroom observation we saw Therese (age 4 years, 7 months) play Uno. Piaget would say that Therese should have been unable to play Uno at her age because this game requires decentration (attending to two aspects of an object at once - both the color and the number of the cards). How can we explain Therese's ability which runs counter to Piaget's theory?
(Students could talk about prior experience with the game, the observers lack of attention to truly assessing whether Therese was showing decentration (just guessing which cards to play), other research we had studied which showed these skills develop earlier than Piaget had predicted, etc.)

During our classroom observation, when Heberto was asked to describe himself, he said "I like to play baseball." Which stage, according to Damon and Hart's (1988) theory of self concept development, best describes Heberto? Why do you believe this is the correct stage?
(Students should say this is a categorical description, typical of a five year old child - because Heberto did not describe himself by comparing his abilities to anyone else. He simply told about a characteristic which describes himself.)


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